

## ABSTRACT

A method of making a low-loss electromagnetic wave resonator structure. The method includes providing a resonator structure, the resonator structure including a confining device and a surrounding medium. The resonator structure supporting at least one resonant mode, the resonant mode displaying a near-field pattern in the vicinity of said confining device and a far-field radiation pattern away from the confining device. The surrounding medium supports at least one radiation channel into which the resonant mode can couple. The resonator structure is specifically configured to reduce or eliminate radiation loss from said resonant mode into at least one of the radiation channels, while keeping the characteristics of the near-field pattern substantially unchanged.